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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Eitan Law Group
C/O LandonIP, Inc.
Suite 450
1700 Diagonal Road
Alexandria, VA 22314

EXAMINER

LIN, KELVIN Y

ART UNIT PAPER NUMBER

2142

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/934,535

Applicant(s)

HAVIV, YARON

Examiner

Kelvin Lin

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Detailed Action

Response to Arguments

1. Applicant's arguments with respect to claims 1-51 have been considered but they are not persuasive.
2. Applicant is arguing:
 - 1) The combination of Gidwani in view of Krause fails to teach "having said router select said second computer from a group of computers having multi-channel reliable network hardware according to information in said connection request, said information comprising opaque data" as required by claim 1.
 - 2) The combination of Gidwani in view of Krause fails to teach "upstream traffic from said first computer to said second computer is communicated over said connection via a router and downstream traffic from said second computer to said first computer is communicated directly over said connection" as required by claim 5.
 - 3) The combination of Gidwani in view of Krause fails to teach "having a router transfer transaction traffic between a first computer and a second computer while processing only a portion of said transaction traffic, both computer having multi-channel reliable network hardware" as required by claim 17.

4) The combination of Gidwani in view of Krause fails to teach "converting a session of packet-oriented traffic into transactions comprising remote direct memory access messages" as required by claim 25.

5) The combination of Gidwani in view of Krause fails to teach "one or more routers able to process transactions between two or more computers and to direct said transactions among said computers according to information in said transactions, said computer having multi-channel reliable network hardware" as required by claim 32.

6) The combination of Gidwani in view of Krause fails to teach "a proxy able to receive packet-oriented traffic from a client computer, to convert a session of said packet-oriented traffic into transactions comprising remote direct memory access messages, and to send said transactions to one of said server computers" as required by claim 41.

7) The Krause reference was filed on May 21, 2003, nearly three years after the priority date of the present application.

Therefore, the Krause reference is an inappropriate reference to be cited against the claims of the present application.

As point 1), where the applicant argues that Gidwani fails to teach or suggest this limitations, it has been considered but is not persuasive. At section J, Video Conferencing, and col.41, l. 25-52, Gidwani teaches that video conference when more than two parties (computers) are involved. And, the video conferencing associates with the multi-channel network server UIP (see Abstract). Therefore, Gidwani does teach having said router select said second computer from a group of computers having multi-channel reliable network hardware according to information in said connection request, said information comprising opaque data.

As to point 2), where the applicant argues that Gidwani fails to teach or suggest this limitations, it has been considered but is not persuasive. At section J, Video Conferencing, and col. 41, l.25-61, Gidwani teaches the video conferencing including the point-to-point and multiperson-to-individual video conference over the same DSL connection which communicate with the downstream and upstream traffic (see col.38, l.35-67) via IP router (see Fig. 13). Therefore, Gidwani does teach upstream traffic from said first computer to said second computer is communicate over said connection via a router and downstream traffic from said second computer to said first computer is communicated directly over said connection.

As to point 3), where the applicant argues that Gidwani fails to teach or suggest the router process the traffic, it has been considered but is not persuasive. At col. 41, l.25-61, Gidwani teaches the video conferencing including the point-to-point and multiperson-to-individual video conference over the same

DSL connection which communicate with the downstream and upstream traffic (see col.38, l.35-67) via IP router (see Fig. 13). Moreover, at col. 40, l.29-30, Gidwani teaches the IP router **interface** with the internet, which not only transfer it also process the packet with the internet. Therefore, Gidwani does teach having a router transfer transaction traffic between a first computer and a second computer while processing only a portion of said transaction traffic, both computer having multi-channel reliable network hardware.

As to point 4), where the applicant argues that Gidwani fails to teach or suggest RDMA, it has been considered but is not persuasive. At [0062], [0067], Krause teaches the RDMA read WQE, provides a memory semantic operation to read a virtually contiguous buffer on a remote node. And the receive buffer WQE provides a channel semantic operation describing a local buffer into which incoming message are written, which corresponds to convert a session of packet-oriented traffic into transactions comprising remote direct memory access messages.

As to point 5), where the applicant argues that Gidwani fails to teach or suggest the router process the traffic, it has been considered but is not persuasive. At col. 41, l.25-61, Gidwani teaches the video conferencing including the point-to-point and multiperson-to-individual video conference over the same DSL connection which communicate with the downstream and upstream traffic (see col.38, l.35-67) via IP router (see Fig. 13). Moreover, at col. 40, l.29-30, Gidwani teaches the IP router **interface** with the internet, which not only transfer

it also process the packet with the internet. Therefore, Gidwani does teach one or more routers able to process transactions between two or more computers and to direct said transactions among said computers according to information in said transactions, said computer having multi-channel reliable network hardware.

As to point 6), where the applicant argues that Gidwani fails to teach or suggest RDMA, and converting packet-oriented traffic to transactions comprising RDMA, it has been considered but is not persuasive. At [0062], [0067], Krause teaches the RDMA read WQE, provides a memory semantic operation to read a virtually contiguous buffer on a remote node. And the receive buffer WQE, works as a proxy provides a channel semantic operation describing a local buffer into which incoming message are written, which corresponds to convert a session of packet-oriented traffic into transactions comprising remote direct memory access messages. Therefore, Krause teaches a proxy able to receive packet-oriented traffic from a client computer, to convert a session of said packet-oriented traffic into transactions comprising remote direct memory access messages, and to send said transactions to one of said server computers.

As to point 7), The Krause reference, application #10442401 is a continuation in part of #09578019, filed on May 24, 2000, also #09578019 claims priority from provisional application 60135664, and 60154150. Therefore, application 10442401 inherits the benefit of prior date of provisional applications 60135664, and 60154150.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-10, 17-24, 32-40 are rejected under 35 USC 102(e) as being anticipated by *Gidwani S.*, (US Patent No. 6640239).
2. Regarding claim 1, *Gidwani* teaches a method comprising:
 - having a router process a connection request from a First computer having multi-channel reliable network hardware (*Gidwani*, col.23, l.1-15, Fig. 2, in which the first computer - component Video Conference, and the second computer -UIP client are two multi channel devices connected by the router 118);
 - having said router send an acknowledgment for said connection request to said first computer so that a direct connection is established between said first computer and a second computer

having multi-channel reliable network hardware (Gidwani, fig. 1, col.9, I.26-28, col.17, I.7-11, col.21, I.20-30); and

- having said router select said second computer from a group of computers having multi-channel reliable network hardware according to information in said connection request, said information comprising opaque data (Gidwani, col.23, I.1-37, Fig2, router 118 connected to the CPE LAN which has the capability to select video conferencing).

3. Regarding claim 2, Gidwani further discloses the method of claim 1, wherein said router processes said connection request within or above a transport layer only (Gidwani, col.23, I.17-37, H.320 is a transport layer protocol).
4. Regarding claim 3, Gidwani further discloses the method of claim 1, further comprising: having said router filter said connection request according to a predefined policy (Gidwani, col.16, I.50-67, col.17, I.1-15, in ATM, ABR, VBR are predetermined rate policy set by server).
5. Regarding claim 4, Gidwani further discloses the method of claim 1, further comprising: having said router select said second computer from a group of computers having multi-channel reliable network hardware according to load-balancing considerations (Gidwani, col.10, I.60-67).
6. Regarding claim 5, Gidwani further discloses a method comprising:
enabling a connection between a first computer having multi-channel reliable network hardware and a second computer having multi-channel reliable

network hardware so that upstream traffic from said first computer to said second computer is communicated over said connection via a router and downstream traffic from said second computer to said first computer is communicated directly over said connection (Gidwani, fig. 13, col.40, l.1-67, col. 41, l.25-52, the H.320 interface within UIP server is able to direct T1 framer with D channel to control connections corresponds to upstream and B channel downstream is for data traffic directly, after the signal channel set up the connection, the B channel – downstream can delivery traffic directly, this is a well known art in this field).

7. Regarding claim 6, Gidwani further discloses the method of claim 5, further comprising: having said router process said upstream traffic within or above a transport layer only (Gidwani, fig. 13, col.40, l.10-14, in which the H,320 and UIP corresponds to the upstream (D channel) and router over transport layer).
8. Regarding claim 7, Gidwani further discloses the method of claim 5, further comprising; having said router filter said upstream traffic according to a predefined policy (Gidwani, col.43, l. 30-50, the UIP and H.320 setup the bandwidth and predefined policy of ABR, VBR traffic provided by ATM server corresponds to the upstream traffic according to a predefined policy).
9. Regarding claim 8, Gidwani further discloses the method of claim 5, further comprising: having said router gather information on said upstream traffic (Gidwani, col. 40, l.10-24, in which the UIP corresponds to router and gather the video conferencing information on the D channel).

Art Unit: 2142

10. Regarding claim 9, Gidwani further discloses the method of claim 5, further comprising: having said router select said second computer from a group of computers having multi-channel reliable network hardware according to information in said upstream traffic (Gidwani, col. 40, l.1-16).
11. Regarding claim 10, Gidwani further discloses the method of claim 5, further comprising: having said router select said second computer from a group of computers having multi-channel reliable network hardware according to load-balancing considerations (Gidwani, col.11, l.48-51).
12. Regarding claims 17-24, claiming for route transfer, have limitations corresponding to method claims 1-10. Therefore, claims 17-24 are rejected for the same reasons set forth in the rejection of claims 1-10.
13. Regarding claims 32-40, which are claiming one or more routers, and cascaded manner (Gidwani, Fig. 1, has multiple routers and ATM-IP router cascade to IP router) have similar limitations as claims 1-10. Therefore, claims 32-40 are rejected for the same reasons set forth in the rejection of claims 1-10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2142

14. Claims 11-16, 25-31, and 41-51 are rejected under 35 USC 103(a) as being unpatentable over Gidwani (U.S. Patent. No. 6310632) in view of Krause (U.S. Pat. No. 2003/0195983).

15. Regarding claim 11, Gidwani encloses a method comprising:

- a method comprising: having a router process traffic over a connection from a first computer to a second computer, both computers having multi-, channel reliable network hardware (Gidwani col.23, l.1-15, Fig. 2, col. 41, l.25-52);

Although Gidwani teaches a method about the multi-channel network hardware and load-balancing, Gidwani does not specifically teach the Remote Direct Memory Access (RDMA)

However, Krause teaches:

- enabling said second computer to directly transfer data to said first computer over said connection using remote direct memory access messages (Krause, fig. 1, [0042], [0061]-[0062], in which the communication between switch and router send data from local QP to remote QP); and
- having said router process non-remote-direct-memory-access traffic from said second computer to said first computer over said connection (Krause, fig.1, element 35a, 35b, in which SCSI interface from switch 35a to switch 35b via non-remote-direct-memory-access traffic).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to incorporate Krause's SAN structure with Gidwani's scalable switching network (Gidwani, Abstract) via multi-channel reliable network hardware ATM/ fiber channel fabric implementing RDMA for data transfer to improve network utilization, throughput, and efficiency (Kraus, [0012]).

The motivation would be for combining Krause RDMA data transfer system with Gidwani's scalable switching network to enhance the load balancing capability to avoid congestion. (Gidwani, col. 11, l.45-60).

16. Regarding claim 12, Krause further discloses the method of claim 11, wherein said router processes said traffic within or above a transport layer only (Krause, [0070]).
17. Regarding claim 13, Krause further discloses the method of claim 11, further comprising: having said router filter said traffic according to a predefined policy (Krause, [00156], the traffic management to enhance the traffic measurement is according to the network management policy (Krause, [0156]).
18. Regarding claim 14, Krause further discloses the method of claim 11, further comprising: having said router gather information on said traffic (Krause, fig.15, traffic congestion manager using timer to manage the traffic).
19. Regarding claim 15, Krause further discloses the method of claim 11 method of claim 11, further comprising: having said router select said second computer from a group of computers having multi-channel reliable network hardware according to information in said traffic (Krause, fig.1, [0048], fiber channel hub which is the

multi-channel reliable hardware based on the instant specification) .

20. Regarding claim 16, Gidwani further discloses the method of claim 11, further comprising: having said router select said second computer from a group of computers having multi-channel reliable network hardware according to load-balancing considerations (Gidwani, col.11, l.48-51).
21. Regarding claims 25-31, claiming for converting a session packet to RDMA, have limitations corresponding to claims 11-16. Therefore, claims 25-31 are rejected for the same reasons set forth in the rejection of claims 11-16.
22. Regarding claims 41-51, claim for the system have similar limitations as method claims 1-16. Therefore, claims 41-51 are rejected for the same reasons set forth in the rejection of claims 1-16.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE MONTH** shortened statutory period, then the shortened statutory period will expire on the date advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2142

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTH from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Lin whose telephone number is 571-272-3898. The examiner can normally be reached on Flexible 4/9/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER